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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,210	06/26/2003	Yoshikazu Hanada	Q76020	4368

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EXAMINER	
ADDISU, SARA	

ART UNIT	PAPER NUMBER
3722	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/606,210	HANADA, YOSHIKAZU	
	Examiner	Art Unit	
	Sara Addisu	3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The objection to the Specification is withdrawn due to the Applicant's amendment filed 9/1/05.

Claim Rejections - 35 USC § 112

2. The rejection of Claim 16 under 35 U.S.C. 112, second paragraph, is withdrawn due to the Applicant's amendment filed 9/1/05. Claim 16 is currently rejected using a different prior art due to the amendment.

Response to Arguments

3. Applicant's arguments filed 9/1/05 have been fully considered but they are not persuasive.

4. In response to Applicant's argument that Butterworth, U.S. Patent No. 6,718,853 does not anticipate the claims 1 and 18 because it does not teach paper pipe serving as a core, this argument is respectfully traversed. It should be noted that in apparatus claims, the work piece is not given any patentable weight, because it has been held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If

the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. In this instance Butterworth's log saw apparatus for coreless products, is fully capable of being used with products with a core. The phrase "an apparatus for cutting, at appropriate length, a cylinder pipe serving as a core" is merely functional/intended use not defining any specific structure and only requires prior art references to be capable of said intended use. See MPEP 2114.

5. With respect to the method, it should be noted that Butterworth discloses that the paper log could be made with a core or without a core ('853, Col. 1, lines 12-16). The apparatus of Butterworth's invention is with rolled products therefore Butterworth is fully capable of cutting as disclosed cored paper rolls.

6. Regarding claim 3, Applicant argues (page 12, lines 9-14), "Additionally, the Examiner acknowledges that Elliott does not teach using a pair of rotating members positioned opposite to each other and rotating them in opposite directions. In order to correct this deficiency, the Examiner asserts that it would have been obvious to use rotating members on opposite sides which rotate in opposite directions. However, it appears that any motivation to do so is absent from the prior art, and only comes from the present application. The Examiner asserts that it would have been obvious to include debuning devices at both ends

to increase the speed". In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Therefore, Examiner respectfully emphasizes that in a manufacturing/machining environment, reducing downtime and increasing production is key. As a result utilizing two deburring tools on each end of a tube instead of a singe tool performing the process one end at a time, would be have been obvious to one having ordinary skill in the art since it will operation would be completed at half the time thus increasing efficiency.

7. Applicant also asserts that (page 12, lines 16-17), "Additionally, even if it would have been obvious to include a deburring device at each end, there is no evidence that it would have been obvious to rotate them in opposite directions", Applicant is referred to ('383, Col. 3, lines 1-5) where Elliot specifically teaches the deburring device rotating in two opposite directions (first and second directions), therefore in the event two deburring tools are used on opposite end of a tube, the deburring device is capable of being rotated in two opposite directions.

8. Regarding claims 5, 6 and 20 of Applicant's argument (page 13, lines 14-15), "Although Stoffels is directed to cutting a roll with a core, it is not directed to a paper pipe core", please referrer ('867, Col. 5, lines 21-22) where Stoffels teaches the core is typically made of cardboard (i.e. equivalent of paper pipe core). Additionally, even if that was not the case, the explanation above regarding Butterworth not teaching a paper pipe core would have been applicable. Also, Applicant's argument (page 13, lines 19-22), "... Butterworth is directed to cutting a roll using a single blade. In contrast, Stoffels is directed to the use of three blades to cut a roll with a core. It is unclear that any of the particular speeds for the Stoffels blades would be useful if applied to a device using only a single blade. It is unclear that any of the particular speeds for the Stoffels blades would be useful if applied to a device using only a single blade.", Applicant is respectfully directed to ('867, Col. 4, lines 42-50) where Stoffels teaches a variable speed knife motor (46) thus this would make it possible to vary the speed of the blade for the particular application (even if it is a single blade). Additionally, the speeds for the Stoffels blades are not used to modify Butterworth, but rather the teaching of the blade rotating at the same speed as the roll to reduce the heat that is generated ('867, Col. 6, lines 20-23). Regarding Applicant's argument (page 14, lines 7-8), "the blade (42) does not even cut the core, as the core blade 68 is used to cut the core (C)", Stoffels teaches the use of a separate core blade (68) to accommodate a significantly more abrasive core than the roll. If the core is not too abrasive compared to the roll, blade (42) could be used to cut the core as well as the roll.

9. Regarding claims 12, 14 and 17 of Applicant's argument (page 15, lines 5-9), " *the present application does teach a criticality to the groove width. With reference to a non-limiting embodiment, the specification teaches that the width of the groove 128 leads to reducing the amount of burrs generated, see page 16, 4th full paragraph and page 18, end of the 1st full paragraph*", the cited parts of the Specification discuss having a dimensioned width but attention is called to page 12, lines 4-8 where Applicant discuses "*..width dimension of the groove 128 generally ranges between 0.1 mm and 1.0 mm, often between 0.2 mm and 0.6 mm. In manufacturing, a value ranging between 0.3 mm and 0.5 mm may be frequently set as a target value*", here Applicant does not provide any criticality or unexpected results for the specified width dimensions.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1, 2, 4, 7-9, 13, 15,18 and 19, are rejected under 35 U.S.C. 102(e) as being anticipated by Butterworth (U.S. Patent No. 6,718,853).

Butterworth teaches a cutting mandrel (52) having a ring-shaped groove/recess (158: formed by machining, casting, forming, molding and the like, Col. 6, lines 12-14) that corresponds to a cutting position of the cutting blade in the axial direction of the cutting mandrel (see figure 3). Mandrel (52) is positioned within the aperture (16) of log (12) such that its outer peripheral surface comes into contact with an inner surface of the log (12) (Col. 6, lines 33-34). Butterworth also teaches a disc-shaped saw blade (40) positioned opposite to the outer periphery of the log (12) and having cutting edges at its circumference. Furthermore, Butterworth teaches log (12) being rotated by rotating device/motor (36) as well as a motor for rotating the cutting blade (40) (Col. 4, lines 64-67 and Col. 5, lines 19-21). Additionally, Butterworth teaches saw assembly (10) having a main stage and a standby stage (see diagram below) where the standby stage includes a carriage (with mandrel) mounted on a rail such that mandrel (52) is moved longitudinally toward or away (figures 6-9) from the main stage and is positioned coaxially with log (12) where it is supported by log trough (22) (Col. 5, lines 43-57). Butterworth teaches clamp assembly (a driving chuck unit) (28) provided on the main stage opposite to the standby stage that holds an end of the log (12) while the mandrel (12) approaches the paper pipe from the standby stage. Butterworth teaches rotation of log, cutting blade and cutting mandrel, therefore for the apparatus to be operational, the rotations have to be controlled to be within a certain range. As for the phrase used by

the applicant in Claims 1 & 18, "... a difference between linear rotation velocities of the paper pipe rotating device and the cutting blade rotating device is controlled within a certain range" and in Claim 2, "..the linear rotation velocity controller controls the respective rotational linear velocities of the cutting mandrel rotating device, the paper pipe rotating device and cutting blade rotating device to be within a certain range", it is merely intended use and the apparatus taught by Butterworth is capable of functioning such that the rotating components are synchronized and operate within a certain range.

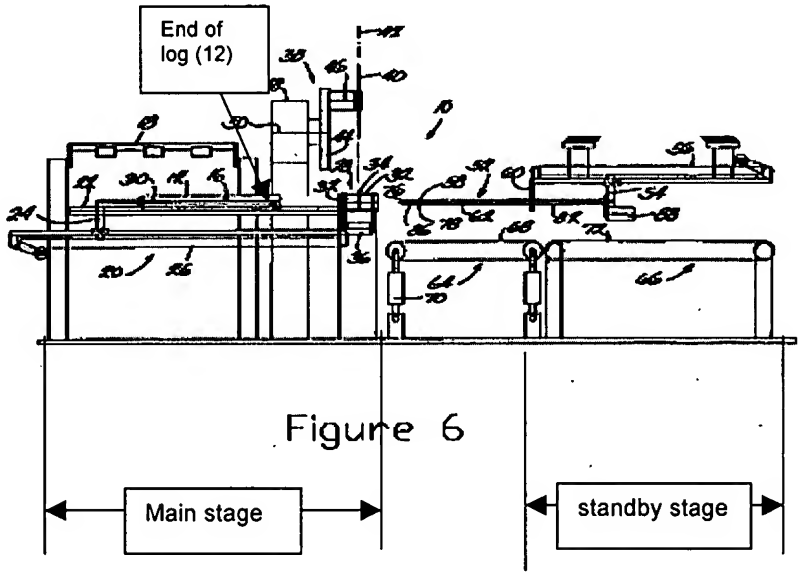

Figure 6

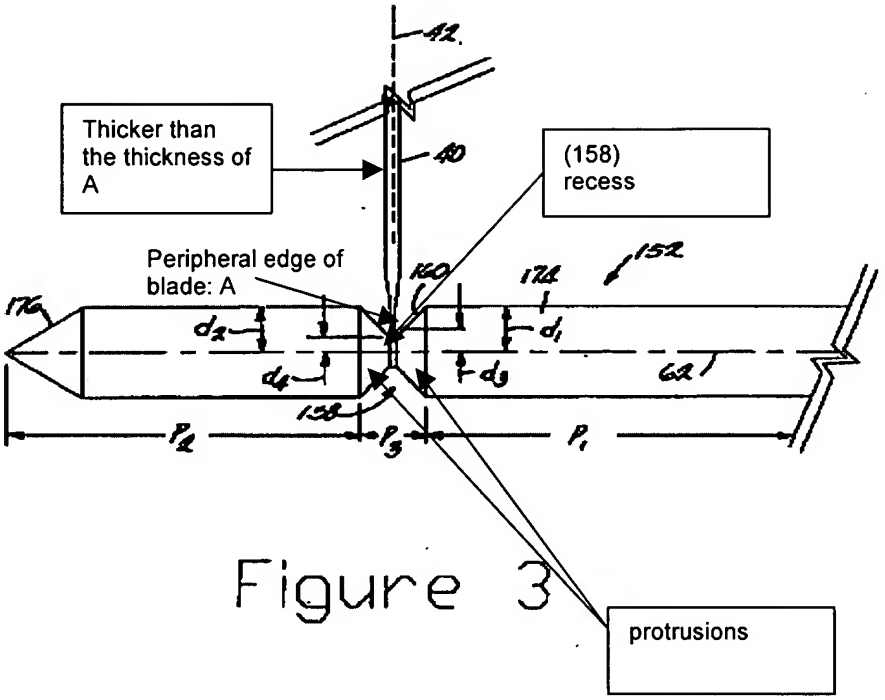

Figure 3

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 3 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over Butterworth (U.S. Patent No. 6,718,853) in view of Elliott (U.S. Patent No. 5,004,383).

Butterworth teaches a log saw apparatus and method as set forth in the above rejection.

However, Butterworth fails to deburring the inner periphery of the already cut pieces.

Elliot teaches a deburring device (10) having an inner edge cutting assembly (18) that contacts tube end (12) (see figure 1). Elliot also teaches cutting assembly (18) having conical (tapered) surface (26) (Col. 2, lines 46-52) that rotates to smooth the inner periphery of the pipe. Furthermore, Elliott teaches the deburring device rotating in two opposite directions (First and Second directions) (Col. 3, lines 1-6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize a tapered cutting assembly (18) on the end of the pipes cut by of Butterworth's invention as taught by Elliott for the purpose of removing the burrs (i.e. make smooth) from the inner periphery of the pipes ('383, Col. 1, lines 6-8). Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the tapered cutting assembly (18) of Elliott's invention simultaneously on both ends of the pipes cut by Butterworth's invention for the purpose of having a time saving, efficient process. Additionally, given the fact that Elliott's invention can rotate in to different directions (First and Second , as set forth in the above rejection), it would have been obvious to one of ordinary skill in

the art at the time of the invention was made to rotate the two deburring devices in opposite direction since Elliot teaches the deburring device having the capability to move in two opposite (first and second) directions ('383, Col. 3, lines 1-5).

12. Claims 5, 6 and 20 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Butterworth (U.S. Patent No. 6,718,853) in view of Stoffels et al. (U.S. Patent No. 4,292,867).

Butterworth teaches a log saw apparatus and method as set forth in the above rejection.

However, Butterworth fails to teach the cutting blade and paper pipe rotating at the same speed. Butterworth also fails to teach the pipe cutting device and the cutting mandrel rotating device being rotated by a common driving source.

Stoffels et al. teaches circular cutting blade (42) rotating at approximately the same circumferential speed as the outer surface of roll (R) (with the mandrel inserted inside) by a variable speed motor (46) (Col. 4, lines 41-44). Stoffels et al. also teaches the cutting mandrel and the pipe being coaxial (in agreement with Page 4, lines 17-20 of the Instant Application).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Butterworth's invention such that log (12) rotates at a velocity that is equal to the rotational velocity of the cutting blade (40), as

taught by Stoffels et al., for the purpose of lowering the heat generated by the cutting operation (Col. 6, lines 20-26).

13. Claims 10-12, 14 and 17 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Butterworth (U.S. Patent No. 6,718,853) in view of Sartori (U.S. Patent No. 5,383,380).

Butterworth teaches a log saw apparatus and method as set forth in the above rejection.

However, Butterworth fails to teach a cutting unit supported and guided on rail section.

Sartori teaches a machine for cutting sections from a cylindrical workpiece (C) having a support mandrel (5) and cutting blade (25) that is rotatably carried on carriage assembly (27) (see figure 1). Carriage assembly (27) is supported on guide rail section (32) for linear movement parallel to the mandrel (5) ('380, Col. 6, lines 61-68).

Regarding claims 12, 14 and 17, Butterworth discloses the claimed invention except for the measurement of the width of the groove on the mandrel. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to vary the with of the groove to accommodate the various blades that could be used having different thickness (i.e. width of blade at the periphery edge), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Applicant should further note that Specification gives no criticality to the claimed limitation (see Page 12, lines 4-8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Butterworth's invention such that a cutting unit is supported and guided on rail section as taught by Sartori, since Butterworth teaches an alternative embodiment where the blade (saw) can be movable to align the different recesses of the mandrel with the blade ('853, Col. 3, lines 47-51).

14. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Butterworth (U.S. Patent No. 6,718,853) in view of Scott (U.S. Patent No. 1,967,374).

Butterworth teaches a log saw apparatus and method as set forth in the above rejection. Furthermore, Butterworth teaches the cutting mandrel (52) teaches mandrel (152) including a shaft (174) that is divided into first and second sections (P1 and P2) and a recess (158) formed in the third section (P3) ('853, figure 3 and Col. 8, lines 23-36). Sections P1 and P2 have protrusion at its end that join to form the recess (158) (see figure above: under 102 (b)).

However, Butterworth fails to teach the mandrel having plurality of mandrel pieces inserted around a main pipe.

Scott teaches tube feeder and cutter having a mandrel (8) having a main shaft/pipe and plurality of tubular sections (12) slipped onto the shaft ('374, figure 5 and

Page 2, lines 25-33). Scott also teaches the length of the tubular sections (12) may vary corresponding to the length of tube section which is desired to cut.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Butterworth's invention such that its first and second sections (P1 and P2) consist of plurality of tubular sections slipped onto the shaft, as taught by Scott for the purpose of having an apparatus that has the versatility to accommodate different length cuts by having quick changing tubular sections that are suited for the particular machining/cut ('374, Page 2, lines 31-33). The modified device of Butterworth would have the protrusions at the end of the tubular sections such that they form a recess upon abutting each other.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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11/14/05
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